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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,444	09/12/2000	Keiichi Iwamura	35.C14834	6601
5514	7590	03/22/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			MILLER, RYAN J	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2621

DATE MAILED: 03/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/660,444

Applicant(s)

IWAMURA, KEIICHI

Examiner

Ryan J. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). The drawings are also objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "805" of Fig. 9. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. The following quotation of 37 CFR § 1.75(a) is the basis of objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

3. Claims 1-19 are objected to under 37 CFR § 1.75 as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery. The claims have a variety of problems that make them difficult to understand. A few of these problems will be described in detail below; however, a complete review of the claims for any additional problems is required.

Regarding claim 1, the claim recites the limitation "compression data" in line 6. There is insufficient antecedent basis for this limitation in the claim. The claim, however, does recite a "compressing means". For examination purposes, the examiner assumes that the data produced by the compressing means is the "compression data". Claims 8 and 9 have a similar problem.

Regarding claim 3, the claim language “converting a part different from said part of said image data in accordance with predetermined information” is grammatically awkward and difficult to understand. What is the “predetermined information”? Is the predetermined information used to both convert the image data and then embedded in the image data? Clarification of this issue is required.

Regarding claim 5, the claim language “the image data which is converted by said embedding means is included in at least said part of the image data which is compressed by said compressing means” is grammatically awkward and difficult to understand. The claims never state that the embedding means of claim 1 converts the image data. The claims merely call for the embedding means to embed the compression data. Clarification of this issue is required.

Regarding claim 10, the claim language “first embedding means for embedding data, as an invisible watermark, showing a result of the compression in said compressing means to a first predetermined bit position of said image data” is grammatically awkward and difficult to understand. First of all, what data is being embedded by the first embedding means? Is it data from the compressing means or is it some other data? Furthermore, what result of the compression is embedded? From the applicant’s specification it seems as though the actual compressed image data is embedded in the original image data. Is this what is meant by “a result of the compression”? Clarification of these issues is required. Claims 16 and 18 are objected to for similar reasons.

Regarding claim 13, the claim recites the limitation “the data” in line 5. There is insufficient antecedent basis for this limitation in the claim. Is this “data” referring to the image

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data in line 2 or the data in line 3? Clarification is required. Claims 17 and 19 are objected to for similar reasons.

Regarding claim 11, the claim recites the limitation "information" in line 2. There is insufficient antecedent basis for this limitation in the claim. To what "information" is this limitation referring? Clarification is required. Claim 14 is objected to for having an identical problem.

Claims 2, 4, 6, 7, 12, and 15 are objected to for depending on objected to claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 5, and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamadaji (U.S. Patent No. 6,192,138 B1).

As applied to claim 1, Yamadaji discloses an image processing apparatus comprising: input means for inputting image data showing an original image (see Fig. 4: Reference numeral 101 referring to a CCD camera for inputting original image information.); compressing means for compressing at least a part of said image data (see column 8, lines 33-38: The reference describes that the digital watermark can be an image capturing a portrait of the copyright holder. The reference further describes that this image can be the same image that is captured by CCD 101. The reference then describes that this image is converted into a reduce- size picture and

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JPEG compressed by the digital watermark processor 104 (i.e. compressing means for compressing at least a part of said image data).); and embedding means for embedding compression data obtained by said compressing means into said image data so that it is difficult to be identified by the human eyes by converting a part of said image data (see Fig. 5: Reference numeral 204 referring to an information embedder. This component embeds the watermark by converting a part of the image data. This process makes the watermark difficult to be identified by human eyes.).

As applied to claim 2, Yamadaji discloses that the image data is constructed by a plurality of bit planes (see column 9, lines 61-65: The reference describes that the scanned image data is divided into blocks of 8x8 pixels (i.e. plurality of bit planes) and said embedding means exchanges said compression data to a lower bit plane (see column 10, lines 17-30: The reference describes that image data of block 1 is modified (i.e. exchanged) by the watermark information (i.e. compression data).).

As applied to claim 5, Yamadaji discloses that the image data which is converted by the embedding means is included in at least the part of the image data which is compressed by the compressing means (see column 8, lines 33-38: The reference describes that the digital watermark can be an image capturing a portrait of the copyright holder. The reference further describes that this image can be the same image that is captured by CCD 101. Therefore, the image data that is converted by the embedding means is included in the image data which is compressed by the compressing means.).

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As applied to claim 7, Yamadaji discloses that the image data comprises color components of RGB (see column 9, lines 2-3: The reference describes that the captured image data is color image data. Color image data will have components of RGB.).

As applied to claim 8, which merely calls for the method performed by the apparatus of claim 1, since Yamadaji discloses the apparatus for performing the method, then the method is also disclosed.

As applied to claim 9, which merely calls for a storage medium for storing a processing program that performs the method of claim 8, Yamadaji discloses such a storage medium since all of the processing performed by Yamadaji is performed by computer (see Fig. 5: Reference numeral 102 referring to a digital image data processor).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 6, and 10-19 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamadaji (U.S. Patent No. 6,192,138 B1) and Kankanhalli et al. (the article titled "Adaptive Visible Watermarking of Images").

As applied to claim 13, which is representative of claims 3, 4, and 10, Yamadaji discloses an image processing apparatus comprising: compressing means for compressing image data (see column 8, lines 33-38: The reference describes that the digital watermark can be an image capturing a portrait of the copyright holder. The reference further describes that this image can

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be the same image that is captured by CCD 101. The reference then describes that this image is converted into a reduce-size picture and JPEG compressed by the digital watermark processor 104 (i.e. compressing means for compressing at least a part of said image data.); encrypting means for encrypting data showing a result of the compression in said compressing means (see column 10, lines 31-37: The reference describes that the watermark data is divided into blocks (i.e. encrypting data showing a result of the compression.); and first embedding means for embedding the data, as an invisible watermark, encrypted by said encrypting means to a first predetermined bit position of said image data. (see Fig. 5 and column 10, lines 15-17: Reference numeral 204 referring to an information embedder that embeds the watermark data that is divided into blocks (i.e. encrypted) into the image data at a position that is previously defined (i.e. predetermined bit position). This process produces an invisible watermark.).

As applied to claim 6, Yamadaji discloses that the image data which is converted by the embedding means is included in at least the part of the image data which is compressed by the compressing means (see column 8, lines 33-38: The reference describes that the digital watermark can be an image capturing a portrait of the copyright holder. The reference further describes that this image can be the same image that is captured by CCD 101. Therefore, the image data that is converted by the embedding means is included in the image data which is compressed by the compressing means.).

As applied to claim 14, which is representative of claim 11, Yamadaji discloses that information showing said first predetermined bit position of said image data in which the data is embedded by said first embedding means is key information (see column 10, lines 2-30: The

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reference describes supplemental information that is embedded in the image and that is also used to decode the watermark (i.e. key information).).

As applied to claim 15, which is representative of claim 12, Yamadaji discloses that the compression by said compressing means is a reversible compression (see column 10, lines 50-52: The reference describes that the compression carried out can be reversible compression.).

Claim 13 further calls for a second embedding means for embedding a visible watermark to a second predetermined bit position of the image data. A second embedding means for embedding a visible watermark into an image is absent from Yamadaji; however, Kankanhalli et al., in the same field of endeavor of image processing and the same problem solving area of digital watermarking, discloses such a feature (see page 571, section 3: The reference describes embedding a visible watermark into an image by altering pixel values in an image that is segmented into 8x8 blocks. The pixel values that are altered are at a predetermined bit position.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Yamadaji by added a second embedding means for embedding a visible watermark as taught in Kankanhalli et al. because the use of a visible watermark “convey[s] an immediate claim of ownership, providing credit to the owner. It also prevents or at least discourages, unauthorized use of copyrighted high quality images” (see Kankanhalli et al.: page 568, section 1).

As applied to claim 17, which is representative of claim 16, which merely calls for the method performed by the apparatus of claim 13, since the combination of Yamadaji and Kankanhalli et al. discloses the apparatus for performing the method, then the method is also disclosed.

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As applied to claim 19, which is representative of claim 18, which merely calls for a storage medium for storing a processing program that performs the method of claim 17, the combination of Yamadaji and Kankanhalli et al. discloses such a storage medium since all of the processing performed by Yamadaji is performed by computer (see Fig. 5: Reference numeral 102 referring to a digital image data processor).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rhoads et al. (U.S. Patent No. 6,574,350 B1) is pertinent in that the reference discloses a system that can detect both visible and invisible watermarks (see Fig. 1).

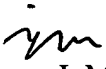
Wu et al. (U.S. Patent No. 6,285,775 B1) is pertinent in that the reference discloses a system that embeds compression information into a compressed image (see Fig. 8A).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Miller whose telephone number is (703) 306-4142. The examiner can normally be reached on M-F 8:00-4:30.

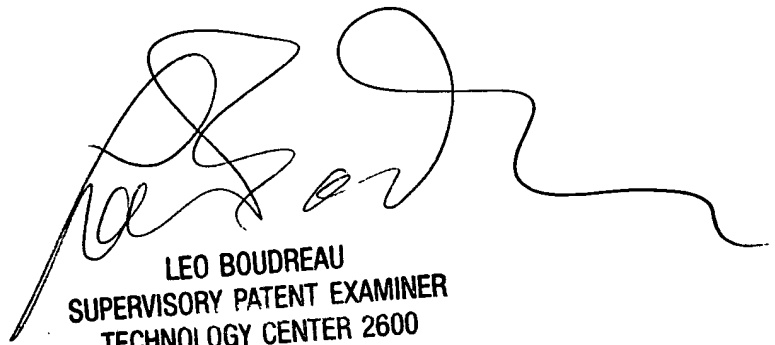
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ryan J. Miller

Ryan J. Miller
Examiner
Art Unit 2621


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